**Screening identified germplasm lines with drought tolerance under *kharif* condition: (2014-15)**

Six germplasm lines with known drought tolerance in previous experiments along with checks (48-1, DCH-519) were grown under rainfed conditions (no irrigation was given) during *kharif*, 2014 with four replications in RBD. All genotypes matured by 150 days. There were not many tertiaries produced. Crop was lanky due to continuous rain fall and more cloudy days during early stages of crop growth.

Table 4: Seed yield of different spike orders, TDM and HI of different genotypes

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Genotypes** | **Seed yield (g/plant)** | | | | **TDM**  **at harvest (g/pl.)** | **HI (%)** |
| **Primary** | **Secondary** | **Tertiary** | **Total** |
| DCH-519 | 42.2 | 45.5 | 0 | 87.7 | 268.6 | 32.6 |
| RG 111 | 16.3 | 47.2 | 0 | 63.5 | 195.3 | 32.3 |
| RG 298 | 23.2 | 51.8 | 40.9 | 115.9 | 256.6 | 45.1 |
| RG 1437 | 23.2 | 45.2 | 0 | 68.4 | 297.5 | 22.9 |
| RG 1494 | 31.8 | 44.6 | 0 | 76.4 | 233.3 | 32.7 |
| RG 1826 | 24.8 | 35.0 | 51.8 | 111.6 | 241.9 | 46.1 |
| RG 2797 | 33.7 | 0.0 | 0 | 33.7 | 312.1 | 10.9 |
| 48-1 | 29.3 | 66.5 | 0 | 95.8 | 302.4 | 31.9 |
| **Mean** | 28.0 | 42 |  | 81.58 | 263.5 | 31.9 |
| **SEm ±** | 3.2 | 4.2 |  | 4.45 | 12.23 | 1.39 |
| **CD p: 0.05** | 9.6 | 12.8 |  | 13.48 | 37.1 | 4.23 |
| **CV(%)** | 19.6 | 17.4 |  | 9.44 | 8.04 | 7.58 |

Primary seed yield was significantly higher in RG 2797, RG 1494 which was on par with check DCH-519 (Table 4). Though there were secondary branches produced, no seed yield of secondaries in RG 2797. Secondary seed yield was more in RG 298 after the check variety 48-1. Tertiary seed yield was recorded only in RG 298 and RG 1826 and total seed yield was also significantly higher in these two genotypes. Total dry matter at harvest was more in RG 2797, RG 1437 but seed yield and harvest index were significantly higher in RG 298 and RG 1826 which shows better performance of these genotypes in rainfed conditions though all other genotypes also showed drought tolerance in field during previous years of experimentation by withholding irrigation from 30 – 90 DAS. Potassium iodide (KI) was sprayed @ 0.2% during tertiary spike seed filling to induce desiccation to identify genotypes with terminal drought tolerance. However, crop desiccation could not be induced with 0.2% KI spray.